

Substitute Specification Clean Version

Computer Mouse With Pencil Grip

FIELD OF THE INVENTION

The invention *computer mouse with pencil grip* refers to a computer mouse, which is used as a pointing tool in connection with the use of a personal computer (PC).

BACKGROUND OF THE INVENTION

A steadily increasing number of people suffer from repetitive stress injuries in arm, shoulder and/or the neck region as a consequence of using a computer mouse in connection with the use of a PC/computer. In addition to causing suffering and problems for a user, these repetitive stress injuries result in economic losses for companies and society. One of the main reasons for why so many people get repetitive stress injuries when using the computer mouse, is an ergonomic design(s) of the state of the art computer mouse. The use of the computer mouse requires finely tuned movements. The design of a traditional computer mouse is such that controlling it requires using parts of the arm muscles, which are developed for more coarsely tuned movements. This results in a consistent high muscle tension (static muscle movement), not only in the part of the arm conducting the movement itself, but also in the adjacent muscles in the arm, shoulder and neck. The reason for this is the need to stabilize the movements so that necessary precision is obtained. This applies both to the traditional computer mouse, where the palm of the hand partly covers the computer mouse and the right and left mouse buttons are controlled by the pointing- and mid finger, respectively, and for computer mice with “joystick” or “pistol grip” design.

There is currently one known computer-pointing device (US 5 343 594) which is controlled by way of a pencil grip. This computer-pointing device, however, has one operational weakness in that the computer-pointing device cannot stand in an operative position when it is not in use. The computer-pointing device either has to be picked up from the surface (desk) or from a holding device, and then be placed in an operative position before the user can resume working.

BRIEF SUMMARY OF THE INVENTION

Computer mouse with pencil grip, according to the invention, combines the ergonomic benefits of the pencil grip with the operational benefits of the traditional computer mouse in that it is constantly in an operative position. This is obtained, according to the invention, by adding a pencil-like shaft with control buttons to a posterior part of the body of the traditional mouse. *Computer mouse with pencil grip* therefore stands in an operative position with the pencil shaft tilted slightly backwards in relation to the body of the mouse also when it is not being operated. According to the *computer mouse with pencil grip*, the user can, in a similar manner as when using the traditional computer mouse, swiftly and easily change between operating the computer keyboard and the computer-pointing device. The invention is otherwise based on known technology used in other types of computer pointing devices.

BRIEF DESCRIPTION OF THE DRAWINGS

A more complete understanding of the present invention may be obtained by reference to the following Detailed Description when taken in conjunction with the accompanying Drawing wherein:

FIGURE 1 illustrates a front and side view of a computer mouse with pencil grip in accordance with principles of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The present invention will now be described more fully hereinafter with reference to the accompanying drawing, in which preferred embodiments of the invention are shown. The invention, may, however, be embodied in many different forms and should not be constructed as limited to the embodiments set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art.

The control buttons (1) and (2) on the *computer mouse with pencil grip* are placed on the lower part of the pencil shaft (3), which is placed on the posterior part of the mouse body (4) and tilted slightly backwards from the posterior part of the mouse body (4). This enables the *computer mouse with pencil grip* to be operated by a normal pencil grip.

Computer mouse with pencil grip is designed in such a way that its weight is balanced such that the computer mouse with pencil grip can stand in an operative position when not in use. This enables a swift and easy change for the user in operating the computer keyboard and the computer-pointing device.

Computer mouse with pencil grip thus combines the ergonomic benefits of the pencil grip with the operational benefits of the traditional computer mouse in that it is in an operative position also when not in use.

Computer mouse with pencil grip can also be supplied with other control buttons, for example a so-called scroll function, by which the screen can be rolled upwards, downwards or sideways.

Computer mouse with pencil grip, according to the invention, is operated by holding the mouse in a normal pencil grip around the pencil shaft (3) and moving it around on a mouse pad in the same manner as when using a traditional computer mouse. A thickness and height of the computer mouse in the area where the pencil shaft (3) is attached is not thicker or higher than the thickness and height of a normal pencil grip around the pencil shaft (4). Furthermore, a diameter and length of the pencil shaft (3) is such that it provides a comfortable and stable pencil grip to the user. The technology which controls the movement of the pointing device on the screen, can be the same as in a traditional computer mouse or similar technology. Signal transmission from *computer mouse with pencil grip* to the computer can be conducted in a similar manner as with a traditional computer mouse via a cord or by using technology for cordless signal transmission.